

CLAIMS

1. A method for stitching at least a first line shaped image and at least a second line shaped image, said first image having an image part intersecting an image part of said
5 second image, said first image being represented by at least a first array of adjacent pixel values, said second image being represented by at least a second array of adjacent pixel values, the method comprising the steps of:
 - locating the part of the first array that is included in the intersection of said images,
 - locating the part of the second array that is included in the intersection of said images,
 - 10 – defining, in at least a third array, a representation of the stitched image by
 - assigning the pixel values of the part of the first array outside the intersection to a first part of said third array,
 - assigning pixel values to represent the intersection of the at least two images to a second part of said third array, said pixel values being calculated by applying at
15 least a first function to the corresponding pixel values of the intersecting parts of said first and second arrays,
 - assigning the pixel values of the part of the second array outside the intersection to a third part of said third array.
- 20 2. A method according to claim 1, wherein said first function calculates a weighted sum.
3. A method according to claim 2, wherein the sum of the weights multiplied to the pixel values when calculating the weighted sum equals 1 for all pixels included in the intersection.
- 25 4. A method according to claim 3, wherein a first and a second pixel included in the intersection are selected, and the weights applied to the pixel values when stepping through the first array equals 1 before reaching said first selected pixel, then the weight is decreasing or unchanged pixel by pixel and when reaching the pixels after said second
30 selected pixel, the weight equals 0.
5. A method according to claim 3, wherein a first and a second pixel included in the intersection are selected, and the weights applied to the pixel values when stepping through the first array equals 0 before reaching said first selected pixel, then the weight is
35 increasing pixel by pixel and when reaching the pixels after said second selected pixel, the weight equals 1.

6. A method according to claim 4, wherein the decreasing/increasing is given by a linear function.

7. A method according to claim 4, wherein the decreasing/increasing is given by a polynomial.

8. A method according to claim 7, wherein the polynomial is at least of second order.

9. A method according to claim 7, wherein the polynomial is at least of third order.

10. A method according to claim 7, wherein the polynomial is at least of fourth order.

11. A method according to claim 7, wherein the polynomial is at least of fifth order.

12. A method according to claim 7, wherein the polynomial contains only even powers.

13. A method according to claim 7, wherein the polynomial contains only odd powers.

14. A method according to claim 4, wherein the weights are given by a table of predetermined values.

15. A method according to claim 4, wherein said selected pixels are identical.

16. A method according to claim 15, wherein said selected identical pixels are selected by following a predefined pattern.

17. A method according to claim 15, wherein said selected identical pixels are selected by following a random pattern.

18. A method according to claim 15, wherein said selected identical pixels are selected by following a pseudo random pattern.

19. A system for stitching at least a first and a second line shaped image produced by a plurality of light sensitive elements in a graphical scanner, said first image having an image part intersecting an image part of said second image, the system comprising:

- 5 – a computer system with an operating system, the computer system comprising input means for entering at least data representations of said first and second images into the system, processing means for processing the data, output means for outputting a result and data storage means having stored therein at least a computer program, the processing means being adapted to respond to commands from the computer program
- 10 by:
- locating the part of the representation of said first image that is included in the intersection of said images,
 - 15 – locating the part of the representation of said second image that is included in the intersection of said images,
 - defining, in the storage medium of the system, a representation of the stitched image by
 - assigning the part of the data representation of said first image not contained in the intersection to a first part of the data representation of the stitched image,
 - 20 – assigning a calculated data representation of the intersection to a second part of the data representation of the stitched image, the calculated data representation being defined from the corresponding data representations of the images contained in the overlapping,
 - 25 – assigning the part of the data representation of said second image not contained in the intersection to a third part of the data representation of the stitched image,

20. A system according to claim 19, wherein the calculated data representation is a
30 weighted sum.

21. A system according to claim 20, wherein the sum of the weights used for calculating the weighted sum equals 1.

35 22. A system according to claim 21, wherein a first and a second pixel included in the intersection are selected, and the weight applied to the pixel values when stepping through the representation of the first image equals 1 before reaching said first selected pixel, then the weight is decreasing pixel by pixel and when reaching the pixels after said second selected pixel, the weight equals 0.

23. A system according to claim 21, wherein a first and a second pixel included in the intersection are selected, and the weight applied to the pixel values when stepping through the representation of the first image equals 0 before reaching said first selected pixel, then
5 the weight is increasing pixel by pixel and when reaching the pixels after said second selected pixel, the weight equals 1.

24. A system according to claim 22, wherein the decreasing/increasing is given by a linear function.

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25. A system according to claim 22, wherein the decreasing/increasing is given by a polynomial.

26. A system according to claim 22, wherein the weights are given by a table of
15 predetermined values, said table being stored in the storage means of the system.

27. A system according to claim 22, wherein said selected pixels are identical.

28. A system according to claim 27, wherein said selected identical pixels are selected
20 according to a predefined pattern, said pattern being stored in the storage means of the system.

29. A system according to claim 27, wherein said selected identical pixels are selected according to a random pattern, said pattern being stored in the storage means of the
25 system.

30. A system according to claim 27, wherein said selected identical pixels are selected according to a pseudo random pattern, said pattern being stored in the storage means of the system.